

- monthly pressure amplitudes, tracks of anticyclones and cyclones, and the meteorological records of several antarctic expeditions. London. 1910. iii, 109p. f°. (London. Solar physics observatory.)
- Madrid. Observatorio de Madrid.** Observaciones meteorológicas... 1902-1905. Madrid. 1910. xx, 611p. 8°.
- Prussia. Landesanstalt für Gewässerkunde.** Jahrbuch... 1906. Berlin. 1910. v. p. f°.
Same. 1907. Berlin. 1910. v. p. f°.
Same. Besondere Mitteilungen. Bd. 2, Hft. 2. Berlin. 1910. 41p. f°.
- Russia. [Hydrographic office.]** Sbornik gidro-meteorologicheskikh nabliudeniij... Vypusk 7. 1904, 1905, 1906 g. Sankt-Peterburg. 1909. xxxiv, 500p. 4°.
Same... Vypusk 8. 1907, 1908 g. Sankt-Peterburg. 1910. xxxi, 399p. 4°.
- St. Ignatius college. Meteorological observatory.** Annual report. v. 15. 1909. Cleveland. n. d. n. p. 8°.
- Sandström, J. W. & Helland-Hansen, B.** Ueber die Berechnung von Meeresströmungen. Bergen. 1903. 43p. 4°. (Rpt. Norwegian fishery- and marine-investigations. v. 2. 1902. No. 4.)
- Smith, F. C.** Relation of climate to the treatment of pulmonary tuberculosis. Washington. 1910. 17p. 8°. (U. S. Publ. health and Marine-hospital serv. P. H. bull. 35.)
- Société astronomique et météorologique de Port-au-Prince.** Bulletin annuel... Année 1909. Port-au-Prince. 1910. 3p. f°.
- Tiflis. Physikalisches Observatorium.** Beobachtungen... 1899. Tiflis. 1909. 230p. f°.
Same. 1900. Tiflis. 1909. 252p. f°.
Same. 1901. Tiflis. 1909. 162p. f°.
Same. 1902. Tiflis. 1909. 170p. f°.
Same. 1903. Tiflis. 1909. 170p. f°.
Same. 1904. Tiflis. 1909. 170p. f°.
- Tsukubasan. [Observatory]** Ergebnisse der meteorologische Beobachtungen, 1907. Tokio. 1910. 129p. f°.
- Venice. Ufficio idrografico.** Le bureau hydrographique du "Magistrato alle Acque" de Venise. Venezia. 1910. 15p. 4°.
- Yntema, Lambertus.** On the brightness of the sky and the total amount of starlight. An experimental study. Groningen. 1909. 62p. f°. (Inaug.-Diss. Groningen.)
- Zi-ka-wei. Observatoire magnétique et météorologique.** Bulletin des observations. T. 33, Année 1907. Fasc. A. Magnétisme terrestre. Shanghai. 1910. 77p. f°.
The storms of August 1910. Shanghai. 1910. 24p. 8°.

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

C. FITZUGH TALMAN, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a —.

Electrical world. New York. v. 56. 1910.
—Daylight and dark-day charts at Milwaukee. p. 1184. (Nov. 17.)
—Lightning phenomena under investigation at University of Illinois. p. 1215. (Nov. 24.) [Note on experiments to devise better protection of buildings against lightning.]

Geographical society of Philadelphia. Bulletin. v. 8. October, 1910.
Van Cleef, Eugene. Climatic influences in the economic development of Australia. p. 1-26.

Wilson, Lucy L. W. Climate and man in Peru. II. p. 27-45.

Japan. Central meteorological observatory. Bulletin. Tokio. 1910.

Okada, T. On the bai-u or rainy season in Japan. p. 1-82.

Korea. Meteorological observatory. Scientific memoirs. Chemulpo. v. 1. 1910.
Mukasa, H. Die Organisation des Koreanischen meteorologischen Observatoriums. p. 1-16. [With list and map of stations, illustrations of weather and storm signals, and views of the central observatory.]

Hirata, T. Evaporation in Korea and south Manchuria. p. 1-21.

Wada, Y. Les pluviomètres du XV^e siècle. p. 1-4.

Nature. London. v. 85. 1910.

—Meteorological relationships. p. 55-56. (Nov. 10.) [Reviews certain investigations by H. H. Hildebrandsson and E. T. Quayle.]

Chree, C[harles]. Atmospheric electricity and rain. p. 80-81. (Nov. 17.)

- Scientific American. New York. v. 103. Nov. 19, 1910.**
—Earthlight. p. 394.
- Boyer, Jacques.** The new Dosne heliograph. p. 402-410. [Illustrated.]
- Scientific American supplement. New York. v. 70. 1910.**
Talman, C. Fitzhugh. The meteorological isograms. A rapidly growing family of curves descended from Alexander von Humboldt's "isotherms." p. 316-318. (Nov. 12.) [Illustrated.]
- Crouzon, —.** Physiological effects of altitude. A new field for investigation. p. 334. (Nov. 19.)
—Dew ponds. p. 346. (Nov. 26.)
- Scottish meteorological society. Journal. Edinburgh. v. 15. 1909.**
Carse, G. A. Atmospheric electricity. p. 143-149. [Sketch of methods and theories.]
- Bell, Herbert.** On the diurnal range of wind velocity at Blackford Hill observatory, Edinburgh. p. 149-154.
- Dudgeon, R. F.** Fifty years' rainfall at Cargen, near Dumfries. p. 155-157.
- Richardson, Ralph.** On the occurrence of great cold throughout Scotland during November and December, 1909, and January, 1910. p. 158-162.
- Fairgrieve, M. McCallum.** Research papers from the Meteorological office. p. 163-175.
—Anomalous readings of dry and wet thermometers. p. 177-179. [Suggests explanations of the wet-bulb reading higher than the dry.]
- Jamieson, T. F.** On the greatest frosts of the past sixty years [in Scotland]. p. 179-181.
- Symons's meteorological magazine. London. v. 45. November, 1910.**
- Mossman, R. C.** Meteorology at the international American scientific congress, Buenos Aires, July, 1910. p. 177-182. [Includes description of the Argentine meteorological service.]
—Casella's insulated rain gauge. p. 182-183.
—Heavy rainfall in Barbados. p. 186-187.
- United States. Weather bureau. Meteorological chart of the North Atlantic ocean. January, 1911.**
- Humphreys, W[illiam] Jackson.** Ocean currents—their relation to one another.
- Archives des sciences physiques et naturelles. Genève. Tome 30. 15 octobre 1910.**
- Drygalski, E. v.** La glaciation des mers. Les conditions de son développement et les faits observés. p. 356-378.
- 9. Congrès international de géographie. Compte rendu. Genève. Tome 2. 1910.**
- Rudolph, E[mil].** Die Beziehungen zwischen den tektonischen und seismischen Verhältnissen Ostasiens. p. 201-213.
- Hobbs, William Herbert.** A study of the damage to bridges during earthquakes. p. 214-219.
- Gerland, Georg.** Das seismische Verhalten des Atlantischen und des Pazifischen Ozeans. p. 220-234.
- Forel, François-A[phonse].** L'association internationale de sismologie. p. 246-249.
- Gautier, Raoul.** Température et précipitations au Grand Saint-Bernard. p. 348-352. [Abstract.]
- Markof, E. S.** Température de l'eau à la surface et fluctuations du niveau du Lac Gokteba; leur relation avec les variations séculaires du climat. p. 375-376.
- Voeikof, A[lexander Ivanovich].** Variations de la température annuelle et des pluies pendant de longues périodes. p. 377-379.
- Panebianco, Hypathia.** I tipi isobarici della valle del Po. p. 380-384.
- Maurer, J.** Nouvelle carte pluviométrique de la Suisse. p. 435-437. [Abstract.]
- Polis, [Peter.]** Luftdruckverteilung über dem Atlantischen Ozean und die Bedeutung der drahtlosen Telegraphie für die Erweiterung der täglichen Wetterkarten. p. 440-443.
- Hellmann, G[ustav].** Über die extremen Schwankungen des Regenfalls. p. 444-454.
- Platania, Gaetano.** Effetti magnetici del fulmine. p. 455-459.
- Kassner, Carl.** Meteorologische Erdgloben. p. 460-465.
- Gautier, Raoul.** Climatologie du Grand Saint-Bernard, température et précipitations. p. 466-468.
- Quervain, A[lfred] de.** Über eine neue Methode zur Erforschung der höheren atmosphärischen Strömungen nebst einigen an der Schweizer meteorologischen Zentralanstalt erhaltenen Resultaten. p. 469-472.
- Telles, Silva.** Le régionalisme climatologique. p. 473-478.
- France. Académie des sciences. Comptes rendus. Paris. Tome 151. 14 novembre 1910.**
- Bauer, Edmond, & Moulin, Marcel.** Le bleu du ciel et la constante d'Avogadro. p. 864-866.
- Nature. Paris. 38 année. 26 novembre 1910.**
Loisel, J. La foudre et les éclairs. p. 408-412.
- Annalen der Hydrographie und maritimen Meteorologie. Berlin. 38. Jahrgang. November 1910.**
—Die Witterung und die phänologische Erscheinungen zu Tsingtau in dem Jahre vom Dezember 1908 bis zum November 1909. p. 585-610.

- Engeler, E.** Periodische und unperiodische Temperaturschwankungen der Benguela-Strömung. p. 601-610.
Annalen der Physik. Leipzig. 4. Folge. Band 83. 1910.
- Ångström, A. K. jr.** Eine neue einfache Methode die nächtliche Ausstrahlung zu bestimmen. p. 845-849.
Königlich preussisches meteorologisches Institut. Veröffentlichungen. Berlin. Nr. 223. 1909.
- Kähler, K[arl].** Registrierungen des elektrischen Luftvermögens der Atmosphäre mit dem Benndorf-Elektrometer. p. xi-xxx.
Meteorologische Zeitschrift. Braunschweig. Band 27. Oktober 1910.
- Schwalbe, G.** Über Temperatur- und Feuchtigkeitsanomalien in den beiden letzten Wintern 1908/09 und 1909/10. p. 433-439.
Ficker, H[einrich] v. Über die Entstehung der Föhnwinde auf der Nordseite der Alpen. p. 439-451.
- Wegener, Alfred.** Über die Eisphase des Wasserdampfes in der Atmosphäre. p. 451-459.
- Franz, V.** B. Helland-Hansen und F. Nansen: Die jährlichen Schwankungen der Wassermassen im norwegischen Nordmeer in ihrer Beziehung zu den Schwankungen der meteorologischen Verhältnisse, der Ernteerträge und der Fischereiergebnisse in Norwegen. p. 460-463.
- Köppen, W[ladimir].** Rasche Temperaturschwankungen an der oberen Grenze von Inversionen. p. 463-464.
- Peplow, W.** Über eine Beziehung zwischen Barogramm und Wetterlage. p. 466-469.
- Stade, H.** Einige Bestimmungen der Radioaktivität der Luft über dem Atlantischen Ozean. p. 469-471.
- Weigt, Herkulian.** Der tägliche Gang der Lufttemperatur in Krakau nach den Beobachtungen in den Jahren 1894 bis 1908. p. 472.
- Hann, Julius v.** Zum Klima von Matto Grosso. p. 472-473.
- Weber, O.** Regenmengen des Winterhalbjahres (Regenperiode), gemessen in 43 Stationen des Städte Ceará und Rio Grande do Norte im Jahre 1909. p. 474-475.
- Láska, V.** Über Äquivalente der Windskalen. p. 476-477.
- Weltall. Berlin. 11. Jahrgang. Oktober 1, 1910.**
- Osthoff, H.** Über den Einfluss der Sonne auf die Erde. p. 1-6.
- Wetter. Berlin. 27. Jahrgang. Oktober 1910.**
- Peplow, W.** Luftdruckstudien. p. 217-224.
- Ellemann, F[ritz].** Zur Gewitterkunde Anhalts. p. 225-229.
- Linke, F[ranz].** Zweitägige Kurse über Wetterkunde für Volksschullehrer. p. 235-238.
- Eckardt, Wilh[elm] R.** Wetterlage und Vogelzug. p. 238-240.
- Hemel en Dampkring. Den Haag. 8. Jaargang. October 1910.**
- Kater, J.** Het noorderlicht. p. S1-S8.
- Reale accademia dei Lincei. Atti. Roma. r. 19. 16 ottobre 1910.**
- Eredia, Filippo.** Le isonomale termiche in Italia e loro relazione con la distribuzione della pressione barometrica e con la circolazione aerea nei bassi strati dell'atmosfera. p. 401-407.

CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given, for the various sections of the Climatological Service of the Weather Bureau, the average temperature and rainfall, the stations reporting the highest and lowest temperatures with dates of occurrence, the stations reporting the greatest and least monthly precipitation, and other data, as indicated by the several headings.

The mean temperatures for each section, the highest and

lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperature and precipitation are based only on records from stations that have ten or more years of observations. Of course the number of such records is smaller than the total number of stations.

Temperature and precipitation by sections, October, 1910.

Station.	Temperature—in degrees Fahrenheit.						Precipitation—in inches and hundredths.					
	Section average.	Departure from the normal.	Monthly extremes.				Section average.	Departure from the normal.	Greatest monthly.		Least monthly.	
			Station.	Highest.	Date.	Station.			Station.	Amount.		
Alabama.....	66.7	+ 3.0	2 stations.....	98	1 st	Riverton.....	31	29	Spring Hill.....	9.73	Evergreen.....	0.30
Arizona.....	64.9	+ 0.9	Parker.....	110	7 th	Flagstaff.....	16	21	Prescott.....	1.19	4 stations.....	0.00
Arkansas.....	62.9	+ 0.7	Bentonville.....	96	1 st	Bergman.....	16	29	Marked Tree.....	16.01	Mena.....	1.67
California.....	61.9	+ 1.9	2 stations.....	105	8 th	Montague.....	15	28	Monumental.....	3.47	7 stations.....	0.00
Colorado.....	47.9	+ 2.4	Sheridan Lake.....	100	10 th	Hermit.....	-15	21	Cascade.....	6.77	6 stations.....	0.00
Florida.....	73.1	+ 0.6	Live Oak.....	95	3 rd	Molino.....	27	30	Hypoluxo.....	27.81	Marianna.....	2.15
Georgia.....	66.4	+ 2.4	8 stations.....	95	1 st	2 stations.....	20	30	Valona.....	8.98	Toccoa.....	1.22
Hawaii (September).....	74.1	+ 2.4	Molokai Ranch.....	93	24	Humuula, Hawaii.....	39	67	Rhodes Garden.....	20.55	Waipae Ranch.....	0.00
Idaho.....	48.2	+ 1.9	Gleens Ferry.....	94	10 th	Chersterfield.....	7	27	Wallace.....	6.53	Springfield.....	0.12
Illinois.....	57.9	+ 3.4	Flora.....	97	2 nd	2 stations.....	10	29	Goleonda.....	15.46	Dixon.....	0.54
Indiana.....	57.4	+ 2.8	Rome.....	92	1 st	Judyville.....	15	29	Evansville.....	11.19	Huntington.....	1.81
Iowa.....	55.2	+ 3.3	2 stations.....	93	10 th	Woodburn.....	10	29	Fort Dodge.....	1.73	Chariton.....	T.
Kansas.....	59.9	+ 2.7	2 stations.....	93	17 th	Blakeman.....	10	28	Oswego.....	3.29	Gouldland.....	0.00
Kentucky.....	61.4	+ 3.5	Lynnyville.....	96	2 nd	Beattyville.....	17	30	Blandville.....	11.15	Middleboro.....	1.22
Louisiana.....	69.1	+ 1.8	Liberty Hill.....	100	1 st	2 stations.....	21	29	Sugartown.....	7.00	Liberty Hill.....	0.87
Maryland and Delaware.....	59.4	+ 3.7	College Park, Md.....	92	1 st	2 stations, Md.....	15	30	Seneca, Md.....	8.26	Westernport, Md.....	0.98
Michigan.....	51.6	+ 3.1	Concord.....	93	14 th	Ishpeming.....	8	29	Cheboygan.....	5.81	Detroit.....	1.07
Minnesota.....	50.8	+ 5.2	Beardsley.....	94	2 nd	Long Prairie.....	11	23	International Falls.....	3.47	West Concord.....	0.12
Mississippi.....	66.5	+ 2.2	2 stations.....	96	2 nd	Holly Springs.....	23	29	Austin.....	9.65	Enterprise.....	1.77
Missouri.....	59.4	+ 2.3	5 stations.....	94	17 th	Sublett.....	15	29	New Madrid.....	14.03	Sublett.....	T.
Montana.....	48.5	+ 3.0	Springbrook.....	99	9 th	Red Lodge.....	-1	27	Snowshoe.....	9.55	2 stations.....	0.00
Nebraska.....	55.7	+ 4.2	2 stations.....	97	10 th	Gordon.....	4	26	Cairo.....	2.09	9 stations.....	0.00
Nevada.....	51.0	+ 1.7	Logan.....	101	3 rd	Cobre.....	7	28	Palmetto.....	1.13	2 stations.....	0.00
New England.....	50.9	+ 2.1	Norfolk, Mass.....	89	5 th	Jacksonville, Vt.....	10	31	Nantucket, Mass.....	4.72	Southington, Conn.....	0.55
New Jersey.....	57.2	+ 3.0	Clayton.....	90	6 th	2 stations.....	18	30 th	Cape May.....	5.55	Sussex.....	1.55
New Mexico.....	53.9	+ 0.4	Alma.....	98	1 st	Tres Piedras.....	-1	21	Swastika Ranch.....	2.76	7 stations.....	0.00
New York.....	51.1	+ 2.1	2 stations.....	88	5 th	Franklinville.....	13	29	Adams Center.....	5.77	Sherburne.....	0.84
North Carolina.....	62.8	+ 3.4	Lumberton.....	96	2 nd	Banners Elk.....	11	30	Durham.....	7.08	Bryson City.....	0.93
North Dakota.....	48.2	+ 4.8	Napoleon.....	90	10 th	2 stations.....	0	20	New Salem.....	1.55	Dunseith.....	T.
Ohio.....	56.7	+ 3.7	Amesville.....	94	3 rd	Amesville.....	18	30	Waynesville.....	8.13	Sumnerfield.....	1.27
Oklahoma.....	62.9	+ 1.3	2 stations.....	100	1 st	Hooker.....	11	28	Webbers Falls.....	6.50	3 stations.....	0.02
Oregon.....	52.9	+ 1.5	Ashland.....	89	9 th	Ridge.....	14	1	Glenora.....	15.78	Mikkalo.....	T.
Pennsylvania.....	55.6	+ 3.8	Claysville.....	91	3 rd	Saegerstown.....	14	29	Towanda.....	0.62	Isabela.....	2.90
Porto Rico (September).....	77.0	- 1.2	Humacao.....	96	26 th	Las Marias.....	54	6	La Carmelita (B).....	14.31	Rio Piedras.....	0.87
Porto Rico.....	77.5	- 0.4	Arecibo.....	98	16 th	Los Marias.....	54	8 th	Yemassee.....	9.32	Clemson College.....	1.40
South Carolina.....	66.5	+ 3.5	Santee.....	100	2 nd	2 stations.....	22	30	Cascade Springs.....	2.66	Tamia.....	0.11
South Dakota.....	54.0	+ 6.2	Foresburg.....	100	11 th	Renneber.....	4	27	Clinton.....	1.05	Clinton.....	1.05
Tennessee.....	61.7	+ 2.3	2 stations.....	96	17 th	Mountain City.....	14	30	3 stations.....	0.00	Kelton.....	0.05
Texas.....	67.8	+ 0.4	2 stations.....	101	13 th	Plemons.....	16	28	Galveston.....	9.36	Big Stone Gap.....	T.
Utah.....	49.7	+ 1.4	St. George.....	96	9 th	Woodruff.....	8	28 th	Park City.....	4.17	Burlington.....	0.80
Virginia.....	50.5	+ 3.2	2 stations.....	92	1 st	Marion.....	12	30	Warsaw.....	7.39	Downing.....	0.22
Washington.....	51.4	+ 1.2	Ephrata.....	89	15 th	Colville.....	11	28	Goat Lake.....	20.10	Pinedale.....	0.03
West Virginia.....	58.1	+ 3.5	Spencer.....	95	3 rd	Pickens.....	15	29	Bons Run.....	3.05	Bethel.....	0.22
Wisconsin.....	51.4	+ 3.5	3 stations.....	87	16 th	Prentiss.....	5	29	Plum Island.....	3.55	Bethel.....	0.22
Wyoming.....	45.1	+ 2.8	Hyattville.....	94	9 th	Fox Park.....	-12	20	Bennett.....	3.72	Pinedale.....	0.03

*Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut. †Other dates also.